

Patent claims:

1. A process for granulating slag, in particular from a blast furnace and/or a smelting reduction plant,  
5 in which a granule/water mixture formed during the granulation is fed to a granulation tank (4) and then to a dewatering installation, in which the slag granules are dewatered, the  $H_2S$ -containing vapors and gases formed during the granulation  
10 being at least partially condensed by injection of water in a condensation space which is flow-connected to the granulation tank (4), characterized in that  $H_2S$ -containing residual gases are discharged from the condensation space  
15 below the water injection point, and  $H_2S$  is burnt.
2. The process as claimed in Claim 1, characterized in that the burning is carried out in a combustion chamber (16).
- 20 3. The process as claimed in Claim 1, characterized in that the residual gases, after they have been discharged from the condensation space, are passed in countercurrent to the hot slag, and in the  
25 process  $H_2S$  is burnt to form  $SO_2$ , if appropriate with heat being supplied by means of an ancillary flame.
- 30 4. The process as claimed in one of Claims 1 to 3, characterized in that the combustion flue gas is cooled with water, and the  $SO_2$  formed from  $H_2S$  is precipitated.
- 35 5. The process as claimed in one of Claims 1 to 4, characterized in that the granulation tank (4) is partitioned off in a gastight manner from the dewatering installation.

6. The process as claimed in one of Claims 1 to 5,  
characterized in that a superatmospheric pressure  
is set in the granulation tank (4) and in the  
condensation space below the water injection  
point.
7. The process as claimed in one of Claims 1 to 6,  
characterized in that vapors and gases formed in  
the dewatering installation are passed into the  
condensation space above the water injection  
point.
8. The process as claimed in Claim 7, characterized  
in that a subatmospheric pressure is set in the  
condensation space above the water injection  
point.
9. The process as claimed in Claim 7 or 8,  
characterized in that the quantity of vapor and  
gas passed into the condensation space by means of  
a sucking action is controlled by means of the  
quantity of water injected and is kept at a  
minimum.
10. The process as claimed in one of Claims 1 to 9,  
characterized in that condensate formed in the  
condensation space and injected water are  
discharged from the condensation space and fed to  
the water which has been separated off in the  
dewatering installation and is recirculated for  
granulation and water injection.
11. The process as claimed in one of Claims 1 to 10,  
characterized in that the quantity of injected  
water is controlled as a function of the slag  
rate.

12. An installation for granulating slag, in particular from a blast furnace and/or a smelting reduction plant, comprising a slag channel (1) for delivering the hot slag to a granulation device (2), preferably a spray head, a downstream granulation tank (4) for holding a granule/water mixture, a condensation device (10), preferably a condensation tower, which is flow-connected to the granulation tank (4) and has a water feed (12) and a device (11) for injecting water, and a granule dewatering installation, characterized in that a discharge line (15) for discharging vapors and gases, which is pipe-connected to a combustion chamber (16), is provided in the condensation device (10) below the device (11) for injecting water.
13. An installation for granulating slag, in particular from a blast furnace and/or a smelting reduction plant, comprising a slag channel (1), which is provided with an extractor hood (18), for delivering the hot slag to a granulation device (2), preferably a spray head, a downstream granulation tank (4) for holding a granule/water mixture, a condensation device (10), preferably a condensation tower, which is flow-connected to the granulation tank (4) and has a water feed (12) and a device (11) for injecting water, and a granule dewatering installation, characterized in that a discharge line (15) for discharging vapors and gases, which opens out into the slag channel (1) between the granulation device (2) and the extractor hood (18), is provided in the condensation device (10) below the device (11) for injecting water.
14. The installation as claimed in Claim 12 or 13, characterized in that a water cooler (17) for the

combustion flue gases is provided downstream of the combustion chamber (16) and/or downstream of the extractor hood (18) of the slag channel (1).

- 5 15. The installation as claimed in Claim 13 or 14, characterized in that the slag channel (1) comprises a burner (19) for generating an ancillary flame.
- 10 16. The installation as claimed in one of Claims 12 to 15, characterized in that the granule dewatering installation comprises at least one dewatering device (6a, 6b) and a water basin (7a, 7b, 7c), which are provided with a covering hood (21a, 21b, 15 21c), and a discharge line (22) for discharging vapors and gases, which opens out in the condensation device (10) above the device (11) for injecting water, leads away from the covering hood (21a, 21b, 21c).
- 20 17. The installation as claimed in one of Claims 12 to 16, characterized in that a gas barrier (20) is provided between the granulation tank (4) and the granule dewatering installation.
- 25 18. The installation as claimed in one of Claims 12 to 17, characterized in that a means (13) for trapping water and condensate is provided in the condensation device (10) below the device (11) for 30 the injection of water, from which means (13) leads a discharge line (14) which opens out into the granule dewatering device, in particular the water basin (7c).
- 35 19. The installation as claimed in one of Claims 12 to 18, characterized in that the granule dewatering installation, in particular the water basin (7c), is pipe-connected to the water feed (12) of the

- 15 -

condensation device (10) and/or the granulation device (2).